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 1565 1570 1575
 Pro Asp Val Val Leu Glu Thr Ala Trp Arg His Asn Ile Met Asp
 1580 1585 1590
 Phe Ala Met Pro Tyr Phe Ile Gln Val Met Lys Glu Tyr Leu Thr
 1595 1600 1605
 Lys Val Asp Lys Leu Asp Ala Ser Glu Ser Leu Arg Lys Glu Glu
 1610 1615 1620
 Glu Gln Ala Thr Glu Thr Gln Pro Ile Val Tyr Gly Gln Pro Gln
 1625 1630 1635
 Leu Met Leu Thr Ala Gly Pro Ser Val Ala Val Pro Pro Gln Ala
 1640 1645 1650
 Pro Phe Gly Tyr Gly Tyr Thr Ala Pro Pro Tyr Gly Gln Pro Gln
 1655 1660 1665
 Pro Gly Phe Gly Tyr Ser Met
 1670 1675

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 Leu Ala Leu Leu Gly Trp Trp Trp Phe Phe Ser Arg Lys Lys Gly His
 20 25 30

Val Ser Ser His Asp Glu Gln Gln Val Glu Ala Gly Ala Val Gln Leu
 35 40 45
 Arg Ala Asp Pro Ala Ile Lys Glu Pro Leu Pro Val Glu Asp Val Cys
 50 55 60
 Pro Lys Val Val Ser Thr Pro Pro Ser Val Thr Glu Pro Pro Glu Lys
 65 70 75 80
 Glu Leu Ser Thr Val Ser Lys Leu Pro Ala Glu Pro Pro Ala Leu Leu
 85 90 95
 Gln Thr His Pro Pro Cys Arg Arg Ser Glu Ser Ser Gly Ile Leu Pro
 100 105 110
 Asn Thr Thr Asp Met Arg Leu Arg Pro Gly Thr Arg Arg Asp Asp Ser
 115 120 125
 Thr Lys Leu Glu Leu Ala Leu Thr Gly Gly Glu Ala Lys Ser Ile Pro
 130 135 140
 Leu Glu Cys Pro Leu Ser Ser Pro Lys Gly Val Leu Phe Ser Ser Lys
 145 150 155 160
 Ser Ala Glu Val Cys Lys Gln Asp Ser Pro Phe Ser Arg Val Pro Arg
 165 170 175
 Lys Val Gln Pro Gly Tyr Pro Val Val Pro Ala Glu Lys Arg Ser Ser
 180 185 190
 Gly Glu Arg Ala Arg Glu Thr Gly Gly Ala Glu Gly Thr Gly Asp Ala
 195 200 205
 Val Leu Gly Glu Lys Val Leu Glu Glu Ala Leu Leu Ser Arg Glu His
 210 215 220
 Val Leu Glu Leu Glu Asn Ser Lys Gly Pro Ser Leu Ala Ser Leu Glu
 225 230 235 240
 Gly Glu Glu Asp Lys Gly Lys Ser Ser Ser Ser Gln Val Val Gly Pro
 245 250 255
 Val Gln Glu Glu Glu Tyr Val Ala Glu Lys Leu Pro Ser Arg Phe Ile
 260 265 270
 Glu Ser Ala His Thr Glu Leu Ala Lys Asp Asp Ala Ala Pro Ala Pro
 275 280 285
 Pro Val Ala Asp Ala Lys Ala Gln Asp Arg Gly Val Glu Gly Glu Leu
 290 295 300
 Gly Asn Glu Glu Ser Leu Asp Arg Asn Glu Glu Gly Leu Asp Arg Asn
 305 310 315 320
 Glu Glu Gly Leu Asp Arg Asn Glu Glu Ser Leu Asp Arg Asn Glu Glu
 325 330 335
 Gly Leu Asp Arg Asn Glu Glu Ile Lys Arg Ala Ala Phe Gln Ile Ile
 340 345 350

Ser Gln Val Ile Ser Glu Ala Thr Glu Gln Val Leu Ala Thr Thr Val
 355 360 365
 Gly Lys Val Ala Gly Arg Val Cys Gln Ala Ser Gln Leu Gln Gly Gln
 370 375 380
 Lys Glu Glu Ser Cys Val Pro Val His Gln Lys Thr Val Leu Gly Pro
 385 390 395 400
 Asp Thr Ala Glu Pro Ala Thr Ala Glu Ala Ala Val Ala Pro Pro Asp
 405 410 415
 Ala Gly Leu Pro Leu Pro Gly Leu Pro Ala Glu Gly Ser Pro Pro Pro
 420 425 430
 Lys Thr Tyr Val Ser Cys Leu Lys Ser Leu Leu Ser Ser Pro Thr Lys
 435 440 445
 Asp Ser Lys Pro Asn Ile Ser Ala His His Ile Ser Leu Ala Ser Cys
 450 455 460
 Leu Ala Leu Thr Thr Pro Ser Glu Glu Leu Pro Asp Arg Ala Gly Ile
 465 470 475 480
 Leu Val Glu Asp Ala Thr Cys Val Thr Cys Met Ser Asp Ser Ser Gln
 485 490 495
 Ser Val Pro Leu Val Ala Ser Pro Gly His Cys Ser Asp Ser Phe Ser
 500 505 510
 Thr Ser Gly Leu Glu Asp Ser Cys Thr Glu Thr Ser Ser Ser Pro Arg
 515 520 525
 Asp Lys Ala Ile Thr Pro Pro Leu Pro Glu Ser Thr Val Pro Phe Ser
 530 535 540
 Asn Gly Val Leu Lys Gly Glu Leu Ser Asp Leu Gly Ala Glu Asp Gly
 545 550 555 560
 Trp Thr Met Asp Ala Glu Ala Asp His Ser Gly Gly Ser Asp Arg Asn
 565 570 575
 Ser Met Asp Ser Val Asp Ser Cys Cys Ser Leu Lys Lys Thr Glu Ser
 580 585 590
 Phe Gln Asn Ala Gln Ala Gly Ser Asn Pro Lys Lys Val Asp Leu Ile
 595 600 605
 Ile Trp Glu Ile Glu Val Pro Lys His Leu Val Gly Arg Leu Ile Gly
 610 615 620
 Lys Gln Gly Arg Tyr Val Ser Phe Leu Lys Gln Thr Ser Gly Ala Lys
 625 630 635 640
 Ile Tyr Ile Ser Thr Leu Pro Tyr Thr Gln Ser Val Gln Ile Cys His
 645 650 655
 Ile Glu Gly Ser Gln His His Val Asp Lys Ala Leu Asn Leu Ile Gly
 660 665 670

Lys Lys Phe Lys Glu Leu Asn Leu Thr Asn Ile Tyr Ala Pro Pro Leu
 675 680 685
 Pro Ser Leu Ala Leu Pro Ser Leu Pro Met Thr Ser Trp Leu Met Leu
 690 695 700
 Pro Asp Gly Ile Thr Val Glu Val Ile Val Val Asn Gln Val Asn Ala
 705 710 715 720
 Gly His Leu Phe Val Gln Gln His Thr His Pro Thr Phe His Ala Leu
 725 730 735
 Arg Ser Leu Asp Gln Gln Met Tyr Leu Cys Tyr Ser Gln Pro Gly Ile
 740 745 750
 Pro Thr Leu Pro Thr Pro Val Glu Ile Thr Val Ile Cys Ala Ala Pro
 755 760 765
 Gly Ala Asp Gly Ala Trp Trp Arg Ala Gln Val Val Ala Ser Tyr Glu
 770 775 780
 Glu Thr Asn Glu Val Glu Ile Arg Tyr Val Asp Tyr Gly Gly Tyr Lys
 785 790 795 800
 Arg Val Lys Val Asp Val Leu Arg Gln Ile Arg Ser Asp Phe Val Thr
 805 810 815
 Leu Pro Phe Gln Gly Ala Glu Val Leu Leu Asp Ser Val Met Pro Leu
 820 825 830
 Ser Asp Asp Asp Gln Phe Ser Pro Glu Ala Asp Ala Ala Met Ser Glu
 835 840 845
 Met Thr Gly Asn Thr Ala Leu Leu Ala Gln Val Thr Ser Tyr Ser Pro
 850 855 860
 Thr Gly Leu Pro Leu Ile Gln Leu Trp Ser Val Val Gly Asp Glu Val
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 Gln Leu Lys Phe Thr Thr Ser Asp Ser Cys Asp Arg Ile Thr Asp Glu
 20 25 30

Phe Gln Leu Leu Gln Ala Gln Tyr His Ser Leu Lys Leu Glu Cys Asp
 35 40 45
 Lys Leu Ala Ser Glu Lys Ser Glu Met Gln Arg His Tyr Val Met Tyr
 50 55 60
 Tyr Glu Met Ser Tyr Gly Leu Asn Ile Glu Met His Lys Gln Ala Glu
 65 70 75 80
 Ile Val Lys Arg Leu Asn Gly Ile Cys Ala Gln Val Leu Pro Tyr Leu
 85 90 95
 Ser Gln Glu His Gln Gln Gln Val Leu Gly Ala Ile Glu Arg Ala Lys
 100 105 110
 Gln Val Thr Ala Pro Glu Leu Asn Ser Ile Ile Arg Gln Gln Leu Gln
 115 120 125
 Ala His Gln Leu Ser Gln Leu Gln Ala Leu Ala Leu Pro Leu Thr Pro
 130 135 140
 Leu Pro Val Gly Leu Gln Pro Pro Ser Leu Pro Ala Val Ser Ala Gly
 145 150 155 160
 Thr Gly Leu Leu Ser Leu Ser Ala Leu Gly Ser Gln Ala His Leu Ser
 165 170 175
 Lys Glu Asp Lys Asn Gly His Asp Gly Asp Thr His Gln Glu Asp Asp
 180 185 190
 Gly Glu Lys Ser Asp
 195

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33

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 <212> DNA
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<220>
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 cgcggtacct cagtatttcg tgcagtcgta gga

33

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<212> DNA
<213> Artificial

<220>
<223> PCR primer

<400> 11
taatacgact cactataggg

20

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<211> 19
<212> DNA
<213> Artificial

<220>
<223> PCR primer

<400> 12
agggcgtgaa tgtaagcgt

19